

## Claims

What is claimed is:

1. A method of enhancing input/output (I/O) connectivity of a communications environment, said method comprising:

providing a plurality of sets of I/O communications subadapters to an operating system image of the communications environment, said plurality of sets of I/O communications subadapters providing information to the operating system image relating to a plurality of components associated with the plurality of sets of I/O communications subadapters.

2. The method of claim 1, wherein an I/O communications subadapter of one set of said plurality of sets of I/O communications subadapters is associated with a component of the plurality of components, and an I/O communications subadapter of another set of said plurality of sets of I/O communications subadapters is associated with the component.

3. The method of claim 2, wherein the component comprises an I/O device.

4. The method of claim 1, wherein the plurality of sets of I/O communications subadapters is transparent to an operating system image not exploiting the plurality of sets of I/O communications subadapters.

5. The method of claim 4, wherein a default set of I/O communications subadapters is used for the operating system image not exploiting the plurality of sets of I/O communications subadapters.

6. The method of claim 1, further comprising enabling use of the plurality of sets of I/O communications subadapters by the operating system image.

7. The method of claim 6, wherein the enabling use comprises setting an enable indicator by the operating system image via a command executed by the operating system image.

8. The method of claim 1, wherein the plurality of sets of I/O communications subadapters are associated with a multiple image facility image coupled to a logical partition of the communications environment, said logical partition executing the operating system image.

9. The method of claim 8, wherein the communications environment comprises a central processing complex having a plurality of logical partitions executing a plurality of operating system images, said central processing complex being coupled to a plurality of multiple image facility images, each multiple image facility image of one or more multiple image facility images of said plurality of multiple image facility images comprising a plurality of sets of I/O communications subadapters.

10. The method of claim 9, wherein the plurality of multiple image facility images are associated with one or more I/O subsystem images of an I/O subsystem coupled to the central processing complex.

11. The method of claim 1, wherein a set of I/O communications subadapters of the plurality of sets of I/O communications subadapters is represented by a subchannel set identifier.

12. The method of claim 1, further comprising dynamically changing a set of I/O communications subadapters of the plurality of sets of I/O communications subadapters.

13. The method of claim 1, wherein a set of I/O communications subadapters of the plurality of sets I/O communications subadapters includes a different number of I/O communications subadapters than another set of I/O communication subadapters of the plurality of sets of I/O communications subadapters.

14. The method of claim 1, wherein a set of I/O communications subadapters of the plurality of sets I/O communications subadapters includes a same number of I/O communications subadapters as another set of I/O communication subadapters of the plurality of sets of I/O communications subadapters.

15. The method of claim 1, wherein the plurality of sets of I/O communications subadapters comprises a plurality of sets of subchannels and the plurality of components comprises a plurality of I/O devices.

16. A system of enhancing input/output (I/O) connectivity of a communications environment, said system comprising:

means for providing a plurality of sets of I/O communications subadapters to an operating system image of the communications environment, said plurality of sets of I/O communications subadapters providing information to the operating system image relating to a plurality of components associated with the plurality of sets of I/O communications subadapters.

17. The system of claim 16, wherein an I/O communications subadapter of one set of said plurality of sets of I/O communications subadapters is associated with a component of the plurality of components, and an I/O communications subadapter of another set of said plurality of sets of I/O communications subadapters is associated with the component.

18. The system of claim 17, wherein the component comprises an I/O device.

19. The system of claim 16, wherein the plurality of sets of I/O communications subadapters is transparent to an operating system image not exploiting the plurality of sets of I/O communications subadapters.

20. The system of claim 19, wherein a default set of I/O communications subadapters is used for the operating system image not exploiting the plurality of sets of I/O communications subadapters.

21. The system of claim 16, further comprising means for enabling use of the plurality of sets of I/O communications subadapters by the operating system image.

22. The system of claim 21, wherein the means for enabling use comprises means for setting an enable indicator by the operating system image via a command executed by the operating system image.

23. The system of claim 16, wherein the plurality of sets of I/O communications subadapters are associated with a multiple image facility image coupled to a logical partition of the communications environment, said logical partition executing the operating system image.

24. The system of claim 23, wherein the communications environment comprises a central processing complex having a plurality of logical partitions executing a plurality of operating system images, said central processing complex being coupled to a plurality of multiple image facility images, each multiple image facility image of one or more multiple image facility images of said plurality of multiple image facility images comprising a plurality of sets of I/O communications subadapters.

25. The system of claim 24, wherein the plurality of multiple image facility images are associated with one or more I/O subsystem images of an I/O subsystem coupled to the central processing complex.

26. The system of claim 16, wherein a set of I/O communications subadapters of the plurality of sets of I/O communications subadapters is represented by a subchannel set identifier.

27. The system of claim 16, further comprising means for dynamically changing a set of I/O communications subadapters of the plurality of sets of I/O communications subadapters.

28. The system of claim 16, wherein a set of I/O communications subadapters of the plurality of sets I/O communications subadapters includes a different number of I/O communications subadapters than another set of I/O communication subadapters of the plurality of sets of I/O communications subadapters.

29. The system of claim 16, wherein a set of I/O communications subadapters of the plurality of sets I/O communications subadapters includes a same number of I/O communications subadapters as another set of I/O communication subadapters of the plurality of sets of I/O communications subadapters.

30. The system of claim 16, wherein the plurality of sets of I/O communications subadapters comprises a plurality of sets of subchannels and the plurality of components comprises a plurality of I/O devices.

31. A system of enhancing input/output (I/O) connectivity of a communications environment, said system comprising:

a plurality of sets of I/O communication subadapters provided to an operating system image of the communications environment, said plurality of sets of I/O communications subadapters providing information to the operating system image relating to a plurality of components associated with the plurality of sets of I/O communications subadapters.

32. An article of manufacture comprising:

at least one computer usable medium having computer readable program code logic to enhance input/output (I/O) connectivity of a communications environment, the computer readable program code logic comprising:

provide logic to provide a plurality of sets of I/O communications subadapters to an operating system image of the communications environment, said plurality of sets of I/O communications subadapters providing information to the operating system image relating to a plurality of components associated with the plurality of sets of I/O communications subadapters.

33. The article of manufacture of claim 32, wherein an I/O communications subadapter of one set of said plurality of sets of I/O communications subadapters is associated with a component of the plurality of components, and an I/O communications subadapter of another set of said plurality of sets of I/O communications subadapters is associated with the component.

34. The article of manufacture of claim 33, wherein the component comprises an I/O device.

35. The article of manufacture of claim 32, wherein the plurality of sets of I/O communications subadapters is transparent to an operating system image not exploiting the plurality of sets of I/O communications subadapters.

36. The article of manufacture of claim 35, wherein a default set of I/O communications subadapters is used for the operating system image not exploiting the plurality of sets of I/O communications subadapters.

37. The article of manufacture of claim 32, further comprising enable logic to enable the use of the plurality of sets of I/O communications subadapters by the operating system image.

38. The article of manufacture of claim 37, wherein the enable logic comprises set logic to set an enable indicator by the operating system image via a command executed by the operating system image.

39. The article of manufacture of claim 32, wherein the plurality of sets of I/O communications subadapters are associated with a multiple image facility image coupled to a logical partition of the communications environment, said logical partition executing the operating system image.

40. The article of manufacture of claim 39, wherein the communications environment comprises a central processing complex having a plurality of logical partitions executing a plurality of operating system images, said central processing complex being coupled to a plurality of multiple image facility images, each multiple image facility image of one or more multiple image facility images of said plurality of multiple image facility images comprising a plurality of sets of I/O communications subadapters.

41. The article of manufacture of claim 40, wherein the plurality of multiple image facility images are associated with one or more I/O subsystem images of an I/O subsystem coupled to the central processing complex.

42. The article of manufacture of claim 32, wherein a set of I/O communications subadapters of the plurality of sets of I/O communications subadapters is represented by a subchannel set identifier.

43. The article of manufacture of claim 32, further comprising change logic to dynamically change a set of I/O communications subadapters of the plurality of sets of I/O communications subadapters.

44. The article of manufacture of claim 32, wherein a set of I/O communications subadapters of the plurality of sets I/O communications subadapters includes a different number of I/O communications subadapters than another set of I/O communication subadapters of the plurality of sets of I/O communications subadapters.

45. The article of manufacture of claim 32, wherein a set of I/O communications subadapters of the plurality of sets I/O communications subadapters includes a same number of I/O communications subadapters as another set of I/O communication subadapters of the plurality of sets of I/O communications subadapters.

46. The article of manufacture of claim 32, wherein the plurality of sets of I/O communications subadapters comprises a plurality of sets of subchannels and the plurality of components comprises a plurality of I/O devices.

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